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(54) Title: ILLUMINATION SYSTEM COMPRISING A RADIATION SOURCE AND A FLUORESCENT MATERIAL

(57) Abstract: The invention is concerned with an illumination system, comprising a radiation source and a fluorescent material comprising at least one phosphor capable of absorbing a part of light emitted by the radiation source and emitting light of wavelength different from that of the absorbed light; wherein said at least one phosphor is an oxido-nitrido-silicate of general formula  $EA_{2^{-2}}Si_{5^{-8}}B_8N_{8^{-6}}O_a$ :Ln<sub>z</sub>, wherein  $0 < z \le 1$  and 0 < a < 5. comprising at least one element EA selected from the group consisting of Mg, Ca, Sr, Ba and Zn and at least one element B selected from the group consisting of Al, Ga and In, and being activated by a lanthanide selected from the group consisting of cerium, europium, terbium, praseodymium and mixtures thereof. The invention is also concerned with a phosphor, which is an oxido-nitrido-silicate of general formula  $EA_{2^{-2}}Si_{5^{-8}}B_8N_{8^{-6}}O_a$ :Ln<sub>z</sub>, wherein 0

